

Appl. No 10/614,261  
Amdt. Dated Jan. 18, 2006  
Reply to Office Action of Oct. 18, 2005

### **REMARKS**

#### **A. Status of the Claims**

Claims 1-25 are currently pending. Claims 18-25 have been withdrawn as the result of an earlier restriction requirement. Applicant retains the right to present claims 18-25 in a divisional application. Claims 2, 7, 8, 10, and 11 have been canceled. Claims 3, 9, 13, and 17 have been amended in response to Examiner's rejection. Claims 1, 4-6, 12, and 14-16 remain unchanged. Reconsideration and further examination are respectfully requested.

#### **B. Specification Amendments**

Applicant has added an explicatory line with reference to an additional patent and corrected a typographical error of the second paragraph of the Specification. Applicant has also corrected typographical and grammatical errors of the second, third, and fourth paragraph, respectively of the Specification.

#### **C. The 35 U.S.C. § 102 Rejection**

The Examiner has rejected claims 1, 4, 6-12, and 14-15 under 35 U.S.C. § 103(a) as being unpatentable over Drumm in view of Pelosi and Chen. Applicant respectfully traverses the rejection of these claims.

With regard to claims 1, 8, and 9 as in Drumm, the present invention does disclose a headset "based on the computer user's head" and a "microphone" for the purpose of controlling the position of a cursor marker on a computer monitor screen. Drumm is not however prior art because Drumm does not disclose a headset having a laser speckle or interference pattern generator there onto projecting a laser speckle pattern onto the computer screen, a wireless transmitter, a small battery power source, a solid state optical mouse sensor, generally of the two-dimensional optical pattern autocorrellator type. With reference to claim 9 and any such

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citation in the present invention, we respectfully request the equivalent substitution of the type of mouse sensor for the specific trade model Agilent Technologies model HDNS-2000. Thus Drumm is not prior art in of itself.

Let us now consider Pelosi. Although Pelosi discloses a headset with an emitter, said patent does not disclose a laser speckle pattern generator nor the use of an optical mouse sensor generally of the two-dimensional light pattern autocorrelator type (for example the Agilent HDNS-2000). (Col. 19, lines 40-42) makes reference to the use of "laser light," however laser light in of itself does not generate a speckle pattern. Furthermore, Pelosi does not disclose a sensor for detecting the motion of a speckle pattern. The sensor element disclosed in Pelosi responds to the average differential intensity of the projected light (col. 6 lines 32-36. see also col. 9 line 64 – col. 10 line 22) and not the novel two-dimensional light pattern autocorrelator tracking of a speckle pattern as in the present invention. Pelosi does not project a laser speckle pattern generally onto the computer screen as the Examiner infers from (col. 5, lines 10-23). There is no mention of a laser speckle pattern nor of a two dimensional light pattern autocorrelator detector in these lines. Pelosi does mention a wireless transmitter (col. 8, lines 39-41), however it is not for the purpose of transmitting voice commands as in the present invention. Pelosi discloses a battery power source (col. 8, lines 39-41), however Pelosi does not disclose the use of a two dimensional light pattern autocorrelator as taught in the present invention nor such a sensor being affixed to the side of the computer screen nor the positioning of such a sensor such that it would receive a laser speckle or interference pattern. (Col. 5, lines 10-23) does not make any reference to the novel teachings of the present invention; for example, Pelosi does not make use of a laser interference pattern or a laser speckle pattern generator, nor the means to measure

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the motion of such a pattern through the use of a two-dimensional optical pattern autocorrelator. Thus Drumm taken with the teachings of Pelosi do not comprise prior art.

Let us consider Chen. Chen teaches the use of a wireless link into the sound card of a computer, see Chen Fig. 2. Chen does not teach the use of a Bluetooth type link. Chen teaches the use of his invention for a "professional audio system." Chen does not teach commanding the computer in terms of file control, cursor button pushing, nor does he teach the use of voice recognition software for the purpose of converting voice commands into computer operation as is done in the present invention. Thus the teachings of Drumm taken in conjunction with those of Pelosi and Chen do not comprise prior art to the present invention.

In regards to claim 6, let us again consider Pelosi. Pelosi does teach the use of a "wireless transmitter" (col. 8, lines 39-41). However, Pelosi does not teach the use of a microphone to transmit voice articulated computer commands such as "open," "close," "drag" etc. over a wireless link such as Bluetooth to the computer where these commands are to be intercepted by voice recognition software as computer operations. The use of the wireless transmitter by Pelosi would be to transmit light detector signals on the headset to the fixed receiver, see (col. 8, lines 52-61) which is not taught by the present invention. Thus the absence of any teachings by Pelosi with regard to claim 6 does not make Drumm, Pelosi, and Chen prior art in regard to claim 6.

In regards to claim 7, it is well known in the art that wireless transmitter communication is carried out by electromagnetic means. Therefore, claim 7 does not modify claim 1. We hereby retract this claim.

In regards to claim 9, the objection of the Examiner is acknowledged and we hereby modify the claim to remove reference to the specific commercial product HDNS-2000 and

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replace it with a description of the function of the sensor, viz., "two-dimensional optical pattern autocorrelator type."

In regards to claim 10, we hereby cancel this claim.

In regards to claim 11, we hereby cancel this claim.

In regards to claim 12, Pelosi does not disclose a sensor of the type taught in the present invention, namely a two-dimensional optical pattern autocorrelator, for example an HDNS-2000, which is generally supplied in the market place with an incorporated lens and aperture. Also, Pelosi does not disclose the use of a laser interference pattern or laser speckle pattern generator. (Col. 6, lines 50-67) and (col. 7, lines 1-17) refer merely to an incoherent LED light source which would not produce a useful speckle pattern. The referenced emitters are being used as a general purpose illuminator. These do not function as speckle pattern generators. Therefore in view of the lacking of any teaching to the effect and purpose of dependent claim 12, Drumm in conjunction with Pelosi do not form prior art to the present invention.

In regards to claims 14 and 15, the claimed method steps parallel the structural means cited in claims 1, 4, and 3 respectfully and are hereby defended for the same reasons and should thus stand.

With regard to claim 13, as Drumm taken in conjunction with Pelosi and Chen do not constitute prior art to the present invention as demonstrated above, the addition of a dependent claim 13 is merely clarifying the independent claim 1. That is, by the above demonstration, there is no prior art as claimed in 1 and therefore the art of claim 1 can be combined with any well known art and still maintain its novel characteristics. There are no known apparatus or method of claim 1 used in conjunction with the known art cited in claim 13. Thus there are no known apparatus of claim 13. Claim 13 should thus stand.

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With regard to claim 16, Koizumi does not disclose cursor motion control being accomplished by the process characteristic of the solid state, optical mouse sensor as taught in the present invention. Koizumi et. al. does not teach the use of a laser speckle pattern or laser interference pattern tracking as is done in the present invention. Nor does Koizumi teach the use of a two dimensional optical mouse pattern autocorrelator such as an HDNS-2000 device. Therefore Koizumi does not teach the modification of the circuit to get the proper handedness. (Col. 6, lines 13-22) refers to specific characteristics of Koizumi's detector layout. Drumm taken in conjunction with Koizumi does not constitute prior art to the present invention and dependent claim 16 should be allowed.

Let us consider now Frulla et. al. in regards to claims 2, 3, and 17. Claim 2 is hereby retracted. Claim 3 is hereby modified to refer to apparatus of claim 1. Frulla does teach controlling a computer by voice command, (col. 5, line 57 to col. 6, line 5). The teachings of Frulla, however, cannot be used to modify Drumm to produce the present invention as Drumm does not teach the critical elements of the present invention as noted above. Claim 17 however, is modified to remove the reference to the Microsoft XP operating system.

Let us consider Claus et. al. in regards to claim 5. Although Claus teaches focusing a laser beam into a fiber, Claus does not teach the use of a fiber optic bundle which far exceeds a single fiber in its efficiency of producing a laser speckle or interference pattern. It is not Claus's intent to produce a spreading illumination source, quite to the contrary, Claus seeks to focus the output of the fiber, for example Figure 4 lens 24 (col. 10 lines 30-60) onto a spatial filter 26. Claus does not recite any use of a holographic element to produce a laser speckle or interference pattern. Furthermore, Claus does not teach moving the laser speckle pattern generator as an intact whole, but only the fiber part, specifically figure 3 and (col. 7, lines 47-52). Thus the

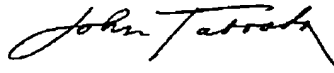
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exercise of considerable inventive talent would be required to derive the laser speckle pattern generator and function as used in the present invention from the teachings of Claus et. al. Furthermore, Drumm does not teach the use of such a novel illumination source. Therefore the dependent claim 5 should stand as stated.

**X. Conclusion**

In view of the above remarks, Applicant respectfully submits that all pending claims are in condition for allowance. Reconsideration of the application and claims is courteously solicited. Should the Examiner have any questions, comments or suggestions relating to the present patent application, the Examiner is invited to contact me at (210) 224-8876.

Respectfully submitted,



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